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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,628	02/04/2002	Byoung Yi Youn	GRANP1.001 C1	4249

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EXAMINER

FULLER, RODNEY EVAN

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 07/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/067,628

Applicant(s)

YOUN, BYOUNG YI

Examiner

Rodney E Fuller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because it exceeds 150 words in length.

Correction is required. See MPEP § 608.01(b).

Priority

3. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Korea on June 2, 2000. It is noted, however, that applicant has not filed a certified copy of the 10-2000-30643 application as required by 35 U.S.C. 119(b).

Specification

4. The disclosure is objected to because of the following informalities:
 - a. On page 8, line 17, the specification states: "left and right inverting apparatuses 11 and 12." However, there is no reference "12" in Figure 1. It appears that "12" should be "22" to correspond drawings.
 - b. On page 10, last line, the word "Is" should be "is."

Appropriate correction is required.

Claim Objections

5. Claims 1-15 and 19-24 are objected to because of the following informalities:

- i. In claim 1 (lines 3-5), the claim states that images are outputted from the display devices "to a screen." There is no screen shown in the drawings and there is no reference to a screen in the specification.
- ii. In claim 1 (lines 6-7), claim 5 (lines 8-9), claim 9 (lines 7-8), claim 19 (lines 7-8) and claim 20 (lines 6-7), the claim states "...left and right image inverting devices for inverting original left and right images and outputting inverted left and right images." It appears from the drawings and specification, that image data is received from the inverting devices and entered into the display devices which projected an inverted image. However, the current claim language can be interpreted that the images coming from the display devices are inverted by the inverter.
- iii. Claims 2-4 depend from claim 1 and therefore include the deficiencies of claim 1.
- iv. Claims 6-8 depend from claim 5 and therefore include the deficiencies of claim 5.
- v. Claims 10-15 depend from claim 9 and therefore include the deficiencies of claim 9.
- vi. Claims 21-24 depend from claims 20 and therefore include the deficiencies of claim 20.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, 3, 9, 10, 13, 14, 19, 20 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Allard, et al. (US 4,743,964).

As best the examiner is able to ascertain the claimed invention, Allard (US 4,743,964) discloses all the structure set forth in the claims. Regarding claims 1, 2, 9, 19, 20, Allard (US 4,743,964) discloses “left and right plane image display devices (Fig. 1, ref.# 12, 22) for simultaneously outputting left and right images received with respect to the same object from left and right sides to a screen; left and right image inverting devices (Fig. 1, ref.# 14, 24) for inverting original left and right images and outputting inverted left and right images; a left reflection mirror (Fig. 1, ref.# 15), on which the inverted left image is incident and reflected at the same angle, so that the reflected left image is perceived by a left eye of a viewer; and a right reflection mirror (Fig. 1, ref.# 25), on which the inverted right image is incident and reflected at the same angle, so that the reflected right image is perceived by a right eye of a viewer.”

Regarding claims 3 and 13, Allard (US 4,743,964) discloses “...wherein each of the left and right plane image display devices comprise a television monitor, a big-screen wall mount TV, a computer monitor, or a LCD.” (See Figure 1, ref.# 12, 22 and column 2, line 58)

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Regarding claims 10 and 20, Allard (US 4,743,964) discloses "...wherein the first and second mirrors are arranged such that the two mirrors as a whole are substantially 'V' shaped."

Regarding claims 14 and 24, Allard (US 4,743,964) discloses "...wherein the first and second positions are substantially symmetric with respect to a line that passes the first object in a latitudinal direction." (See Fig. 1, note all components are symmetrical along a line passing through the center of the viewer)

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allard, et al. (US 4,743,964).

As best the examiner is able to ascertain the claimed invention, Allard (US 4,743,964) discloses all the structure set forth in the claims except "...wherein, in the left and right reflection mirrors, incident angles of the left and right plane images and reflection angles of the images reflected to the viewer are adjusted in a range of about 30-50 degrees." It would have been obvious to one having ordinary skill in the art at the time the invention was made to select the incident angles of the left and right plane images and reflection angles of the images reflected to the viewer to be about 30-50

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degrees, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

10. Claims 5-8, 11, 12, 15-18, 21, 22, 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allard (US 4,743,964) in view of Ricks (US 4,190,856).

As best the examiner is able to ascertain the claimed invention, Allard (US 4,743,964) discloses all the structure set forth in the claims except that Allard (US 4,743,964) discloses a single set of display devices, while the present invention in claims 5-8, 11, 12, 15-18, 21, 22, 25-27 sets forth where the images are produced by multiple display devices and combined with 50/50 mirrors (beamsplitters). However, the use of multiple display devices with 50/50 mirrors are routine in the art as is evident from the teaching of Ricks (US 4,190,856). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Allard (US 4,743,964) by including multiple display devices with associated beamsplitters in place of the individual display devices of Allard (US 4,743,964). The ordinary artisan would have been motivated to modify Allard (US 4,743,964) in order to provide composite or color images to the viewer.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Carollo (US 5,912,650) and Hoshi (US 5,825,539) each disclose "left and right plane image display devices for simultaneously outputting left and right images received

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with respect to the same object from left and right sides to a screen; left and right image inverting devices for inverting original left and right images and outputting inverted left and right images; a left reflection mirror, on which the inverted left image is incident and reflected at the same angle, so that the reflected left image is perceived by a left eye of a viewer; and a right reflection mirror, on which the inverted right image is incident and reflected at the same angle, so that the reflected right image is perceived by a right eye of a viewer.”

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Fuller whose telephone number is (703) 306-5641. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams, can be reached on (703) 308-2847.

Rodney Fuller
Examiner



July 19, 2002